This listing of the claims replaces all prior versions, and listings of claims in the application:

LISTING OF THE CLAIMS

1. (currently amended) A method for managing more devices on a <u>computer</u> network <u>communications system than permitted by a maximum limit for a number of network addresses defined by a networking protocol of said computer network communications system</u> ~~than the maximum number of addresses~~ comprising:

<u>providing a network communications medium for carrying communications between devices of said computer network communications system such that said network communications medium operates in accordance with said networking protocol of said computer network communications system;</u>

<u>providing a network architecture having a maximum number of network addresses corresponding to said maximum limit for said number of network addresses for said networking protocol of said computer network communications system;</u>

<u>providing a plurality of active devices that equals said maximum number of devices;</u>

<u>connecting said plurality of active devices to said network communications medium;</u>

<u>setting an individual address value of each of said plurality of active devices to an unallocated network address;</u>

<u>providing at least one spare device such that said at least one spare device plus said plurality of active devices results in a total number of system devices that exceeds said maximum number of network addresses, said at least one spare device having a network address value, and said at least one network device determining an unallocated network address that is not used by another device connected to said network communications medium and said at least one spare device using said unallocated network address as said network address value for said at least one spare device after at least one of said plurality of active devices is disconnected from said network communications medium and said at least one spare device is connected to said network communications medium;</u>

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operating said computer network communications system with said plurality of active devices;

determining that at least one of said plurality of active devices has failed and has become at least one failed device;

disconnecting said at least one failed device from said network communications medium, said at least one failed device having a first address;

connecting said at least one spare device to said network communications medium;

determining said first address as unallocated by said at least one spare device;

setting said network address value of said at least one spare device to said first address by said at least one spare device; and

operating said computer network communications system with said at least one spare device in place of said at least one failed device.

~~providing said maximum number of devices;~~

~~connecting said maximum number of devices to said network;~~

~~setting an individual address for each of said maximum number of devices;~~

~~providing at least one spare device, said at least one spare device being capable of determining and using addresses of failed devices on said network;~~

~~operating said network with said maximum number of devices;~~

~~determining that at least one of said maximum number of devices has failed;~~

~~removing said at least one of said maximum number of devices from said network whenever said at least one of said maximum number of devices has failed, said at least one of said maximum number of devices having a first address;~~

~~connecting said at least one spare device to said network;~~

~~determining said first address by said at least one spare device;~~

~~assuming said first address by said at least one spare device; and~~

~~operating said network with said at least one spare device in place of said at least one of said maximum number of devices.~~

2. (currently amended) The method of claim 1 wherein said ~~step~~ process of setting ~~an said~~ individual address value of each of said plurality of active devices to an unallocated

network address further ~~for each of said maximum number of devices~~ comprises assigning a predetermined address for at least one of said <u>plurality of active devices</u> ~~maximum number of devices~~.

3. (currently amended) The method of claim 1 further comprising:

<u>providing a plurality of switches such that each switch of said plurality of switches connects and disconnects a device to and from said network communications medium;</u>

attaching ~~connecting~~ <u>each switch of said plurality of switches to</u> each of said <u>plurality of active</u> ~~first number of~~ devices and <u>to</u> said at least one spare device ~~to a switch, said switch being adapted to switch said each of said first number of devices into and out of said network~~; and

connecting each <u>switch</u> of said <u>plurality of</u> switches to a controller <u>that</u> ~~adapted to~~ control<u>s</u> said <u>plurality of</u> switches.

4. (currently amended) The method of claim 3 wherein said <u>process of determining that at least one of said plurality of active devices has failed and has become at least one failed device</u> ~~step of determining that at least one of said maximum number of devices needs to be removed from said network~~ is performed by said controller.

5. (currently amended) The method of claim 4 wherein said <u>plurality of active</u> devices <u>and said at least one spare device</u> comprises a plurality of data storage devices.

6. (currently amended) The method of claim 5 wherein said <u>plurality of active</u> devices are arranged as at least a portion of a RAID system.

7. (currently amended) A <u>computer</u> network <u>communications system that includes more devices in said computer network communications system than permitted by a maximum limit for a number of network addresses defined by a networking protocol of said computer network communications system</u> ~~having a maximum number of devices and at least one spare device~~ comprising:

a network communications medium that carries communications between devices of said computer network communications system such that said network communications medium operates in accordance with said networking protocol of said computer network communications system;

a network architecture that has a maximum number of network addresses corresponding to said maximum limit for said number of network addresses for said networking protocol of said computer network communications system;

a plurality of active devices connected to said network communications medium that equals said maximum number of addresses;

at least one spare device included in said computer network communications system such that said at least one spare device plus said plurality of active devices results in a total number of system devices that exceeds said maximum number of network addresses, said at least one spare device having a network address value, and said at least one network device determining an unallocated network address that is not used by another device connected to said network communications medium and said at least one spare device using said unallocated network address as said network address value for said at least one spare device after at least one of said plurality of active devices is disconnected from said network communications medium and said at least one spare device is connected to said network communications medium;

a plurality of switches attached to each of said plurality of active devices and to said at least one spare device that connects and disconnects each of said plurality of active devices and said at least one spare device to and from said network communications medium; and

a controller that controls each of said plurality of switches such that switches attached to each of said plurality of active devices are connected to said network communications medium until such time said controller causes an unwanted active device to be disconnected from said network communications medium by turning off at least one of said switches attached to each of said plurality of active devices and said controller then causing said at least one spare device to be connected to said network communications medium by turning on a switch of said plurality of switches attached to said at least one spare device.

~~a network architecture having said maximum number of addresses corresponding to said maximum number of devices;~~

~~a plurality of devices attached to said network, the number of said plurality of devices corresponding to said maximum number of addresses;~~

~~at least one spare device adapted to determine an unallocated address that is not used by another device and using said unallocated address as the network address for said at least one spare device;~~

~~a plurality of switches attached to each of said plurality of devices and said at least one spare device and adapted to connect and disconnect said each of said plurality of devices and said at least one spare device to and from said network; and~~

~~a controller adapted to control each of said plurality of switches.~~

8. (currently amended) The <u>computer</u> network <u>communications system</u> of claim 7 wherein said controller ~~is~~ further ~~adapted to~~:

    assess<u>es</u> ~~the~~ <u>a</u> status of each of said plurality of <u>active</u> devices;

    determine<u>s</u> that one of said plurality of <u>active</u> devices is improperly functioning <u>as a failed device</u>;

    cause<u>s</u> a first <u>switch</u> of said plurality of switches to disconnect said <u>failed device</u> ~~one of said plurality of devices~~ from said network <u>communications medium</u>; and

    cause<u>s</u> a second <u>switch</u> of said plurality of switches to connect~~ion~~ said at least one spare device to said network <u>communications medium</u>.

9. (currently amended) The <u>computer</u> network <u>communications system</u> of claim 8 wherein said controller ~~is~~ further ~~adapted to~~ reset<u>s</u> said <u>computer</u> network <u>communications system</u>.

10. (currently amended) The <u>computer</u> network <u>communications system</u> of claim 8 wherein at least two of said plurality of <u>active</u> devices ~~is a~~ <u>are</u> storage device<u>s</u>.

11. (currently amended) The <u>computer</u> network <u>communications system</u> of claim 10 wherein said storage devices are arranged as a RAID system.

12. (currently amended) A <u>computer</u> network <u>communications system that includes more</u> <u>devices in said computer network communications system than permitted by a maximum</u> <u>limit for a number of network addresses defined by a networking protocol of said</u> <u>computer network communications system</u> ~~with automated spares~~ comprising:

<u>means for providing a network communications medium for carrying</u> <u>communications between devices of said computer network communications system</u> <u>such that said network communications medium operates in accordance with said</u> <u>networking protocol of said computer network communications system;</u>

<u>means for providing a network architecture having a maximum number of</u> <u>network addresses corresponding to said maximum limit for said number of network</u> <u>addresses for said networking protocol of said computer network communications</u> <u>system;</u>

<u>means for providing a plurality of active devices that equals said maximum</u> <u>number of devices;</u>

<u>means for connecting said plurality of active devices to said network</u> <u>communications medium;</u>

<u>means for setting an individual address value of each of said plurality of active</u> <u>devices to an unallocated network address;</u>

<u>means for providing at least one spare device such that said at least one spare</u> <u>device plus said plurality of active devices results in a total number of system devices</u> <u>that exceeds said maximum number of network addresses, said at least one spare</u> <u>device having a network address value;</u>

<u>means for operating said computer network communications system with said</u> <u>plurality of active devices;</u>

<u>means for determining that at least one of said plurality of active devices has</u> <u>failed and has become at least one failed device;</u>

<u>means for disconnecting said at least one failed device from said network</u> <u>communications medium, said at least one failed device having a first address;</u>

<u>means for connecting said at least one spare device to said network</u> <u>communications medium;</u>

means for determining said first address as unallocated by said at least one spare device;

means for setting said network address value of said at least one spare device to said first address by said at least one spare device; and

means for operating said computer network communications system with said at least one spare device in place of said at least one failed device.

~~a device means for individually communicating on said network, said device means being greater than the number of addresses available on said network, at least one of said device means being a spare device means;~~

~~a switch means connected to each of said device means and adapted to connect or disconnect each of said first means to said network individually; and~~

~~a controller means for determining if at least one of said device means is to be removed from said network, causing said switch means to disconnect said at least one device means from said network and connecting said spare device means to said network.~~

13. (currently amended) The computer network communications system of claim 12 wherein at least two of said plurality of active devices are ~~first means is a~~ storage devices.

14. (currently amended) The computer network communications system of claim 13 wherein a plurality subset of said plurality of active devices ~~first means~~ are arranged as a RAID system.